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## The Identification of *Hieracium kalmii* (Asteraceae)

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**ABSTRACT.** The types of *Hieracium kalmii* and *H. canadense* are taken to represent two extremes within a species complex. A new combination, *H. kalmii* var. *canadense*, is proposed.

*Hieracium kalmii* L. (Asteraceae) was established by Linnaeus (1753: 804) based on a Pehr Kalm collection (954.43, holotype, LINN) obtained in Pennsylvania. The unusual fruit prompted Monnier (1829: 81) to place the species in its own genus, *Sclerolepis*, which proved to be a later homonym of *Sclerolepis* Cassini, and was renamed *Pachylepis* by Lessing (1832: 139). Gray examined the Kalm sheet and suggested (Torrey & Gray, 1843: 479) that the plant was probably not native to North America. Gray (1884: 424) later concluded that *H. kalmii* was not a species of *Hieracium*. Zahn (1923: 1563), the last monographer of *Hieracium*, retained *H. kalmii* in *Pachylepis* without comment. Fernald (1943) could not satisfactorily dispose of *H. kalmii*, and while he felt it was similar to *H. canadense* Michaux (1803: 86), and especially the southern variety *fasciculatum* (Pursh) Fernald, he regarded the Kalm sheet as representing an introduced exotic. Since 1943, *H. kalmii* has been essentially excluded by American authors from regional floras except for Lepage (1960), who took up *H. kalmii* for *H. canadense* in part.

Lepage (1960) considered the species represented by the Kalm specimen to be a plant of southeastern Canada and New England, and to be most closely related to *H. canadense* and *H. scabriusculum* Schweinitz. His conclusion was not accepted by Gleason & Cronquist (1962) nor by Scoggan (1979), and the name has not been taken up by subsequent authors.

My own examination of the Kalm sheet initially suggested that the plant belonged to the genus *Crepis*, specifically nearest the European *C. vesicaria* L. subsp. *taraxacifolia* (Thuillier) Thellung. The short, plumpish achenes were unlike any I found in herbarium material of this now widespread and weedy subspecies found in Europe, Africa, and North America. Like Gray, I could not match the achenes with any species of *Hieracium*.

When the late Arthur Cronquist (NY) visited The

Natural History Museum (BM) in August 1991, I outlined the problem and produced the Kalm sheet for his examination. He concluded that the specimen was indeed a member of *Hieracium*, and the achenes were merely immature. We concluded that the Kalm specimen represented what Cronquist (Gleason & Cronquist, 1991) was (in August 1991) about to name *H. kalmii*.

The variation within *Hieracium kalmii* is complex and no doubt subject to many interpretations. Lepage (1960) recognized both *H. canadense* and *H. kalmii* at the species rank, and recognized varieties in each. He associated the Kalm specimen with the smaller, less branched, more northern form of the species with an open capitulescence. The larger, more southern expression with an umbelliform capitulescence he named *H. kalmii* var. *fasciculatum* (Pursh) Lepage.

My evaluation of the Kalm sheet, like Fernald's (1943), is that it is a depauperate form of variety *fasciculatum*. Linnaeus stated that the Kalm specimen was found in Pennsylvania, and while one cannot discount the possibility that Kalm gathered it in John Bartram's garden near Philadelphia, it probably came from the southern part of the species' range.

As *Hieracium kalmii* (1753) has priority over *H. canadense* (1803), the following combination is proposed:

***Hieracium kalmii* L. var. *canadense*** (Michaux) Reveal, comb. nov. Based on *H. canadense* Michaux, Fl. Boreali-Amer. 2: 86. 1803 var. *canadense* established by *H. canadense* var. *latifolium* Torrey & A. Gray, Fl. N. Amer. 2: 476. 1843.

The variety *kalmii* is the taller (5–15 dm) and more robust expression of the species with numerous (25–50) firm leaves that seldom have long hairs on the lower surface, and umbelliform capitulescences with short, stout peduncles 2–4 cm long. The variety ranges from Quebec to Minnesota south to New Jersey, Ohio, Illinois, and Missouri. The variety *canadense* is a shorter (1.5–10 dm) and more slender expression with few (5–30) thinner leaves typically

with long hairs on the lower surfaces, and more open capitulescences with longer and more lax peduncles 2–10 cm long. This variety occurs from Labrador and New England to Manitoba and Montana, and is disjunct from British Columbia to Oregon.

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